ABSTRACT

A hard disk drive system having a corresponding method and computer program comprises a hard disk drive comprising a channel; a channel detector adapted to receive a first signal representing a channel sequence from the channel, and to produce a first detected sequence based on the first signal, wherein the first detected sequence comprises a plurality of symbols; a decoder comprising an error-correction decoder adapted to produce first data based on the first detected sequence when a number of symbols in error in the first detected sequence is less than, or equal to, a predetermined number, and to assert a failure indication when the number of symbols in error in the first detected sequence is greater than the predetermined number; and a controller adapted, when the error-correction decoder asserts the failure indication for the first detected sequence, to cause the channel detector to receive a second signal representing the channel sequence from the channel, and to produce a second detected sequence based on the second signal, wherein the second detected sequence comprises a plurality of symbols, and identify corresponding symbols of the first and second detected sequences that differ; wherein the decoder produces second data based on the symbols identified by the controller and at least one of the first and second detected sequences.